

Microepidermabrasion (or more simply microdermabrasion) is a mechanical treatment of the skin that removes older dead cells and allows fresh new ones to become dominant over a series of treatments. It is capable of treating a number of skin conditions.

In the past the effect has been achieved in a number of ways. The original dermabrasion treatment would be done as a single session with the aim being to remove the epidermis (the topmost layer of the skin) down to the dermis. Within the dermis are folds of skin involving the sweat glands and hair follicles which reserve enough skin cells to gradually repopulate the surface of the skin. Doing this is similar to creating a deep graze. There is bleeding and weeping which will last for a number of days until healing has taken place. As with any broken surface there is risk of infection, and, if done too vigorously, or if infection does result, of scarring. A similar effect has also been achieved by chemical peels and laser resurfacing.

There have been microdermabrasion machines available for a number of years in beauty clinics where they have been used as part of facial treatment. The newer medical machines are much more powerful and capable of causing significant damage if not used properly. However, as would be expected, this also allows them to produce excellent therapeutic results. They have been used over the last couple of years of the 1990s in the USA and Australia.

MECHANISM OF ACTION

The machine allows for the gradual mechanical removal of tissue. A vacuum sucks a raised area of skin into the treatment end of the hand-piece while a stream of fine, regularly-shaped aluminium oxide crystals is blown across the skin effectively sandblasting the older skin away.

WHAT MAKES MICRODERMABRASION SO GOOD?

1. Its depth of action is readily controlled.

Because the action is gradual and the site treated is clearly visible, the treatment can be carefully adjusted according to the patient's response. Chemical peels and lasers vary in their effect depending on the agent used. Some chemicals can give an uneven result, some have risks associated with absorption and allergy, and the stronger ones and lasers can result in loss of natural pigmentation and, with deep treatments, scarring.

2. There is no weepy broken skin to protect.

Apart from some transitory redness the skin is intact (allowing for good management of the treatment session). People can return to their usual occupation without concern.

3. It is extremely safe.

There is only a mechanical effect on the skin. The aluminium oxide crystals are inert on skin and mucous membranes. There is no liquid chemical to be absorbed. Apart from keeping the eyes and mouth closed to avoid annoying grit entering them during treatment there are no specific safety requirements for the patient.

4. It stimulates collagen synthesis.

In the dermis new collagen is stimulated from the time of treatment up to 3 months after the session.

This gives more natural support to the skin, eliminating, or lessening, fine lines and wrinkles.

5. It is a very comfortable procedure.

The action is soothing and relaxing.

USES OF MICRODERMABRASION

There are a number of applications:

- Active acne
- Acne scarring
- Scar reduction and softening
- Sun-damaged skin
- Fine lines and wrinkles
- Seborrhoeic keratoses
- Stretch marks
- Some pigmentation changes

AREAS THAT CAN BE TREATED

- Face
- Neck
- Upper chest
- Back of hands
- Elbows
- Other areas as needed

USUAL PROCESS

A cleanser is applied to clear makeup, skin oils etc. The microdermabrasion machine is then used on the affected area in at least two passes, concentrating on problem areas. Another cleanser is then applied to remove excess crystals from the skin. Finally a soother with or without a cream containing a sun block is applied.

WHEN CAN I EXPECT TO SEE RESULTS?

Immediately afterwards the skin will feel very smooth. Some stretch marks (usually the milder ones) have settled after the first one to two treatments. In active acne, normally after the second treatment some definite improvement is seen (but more treatments will be needed). Usually by the third to fourth treatment most people are seeing significant changes. In cases of acne scarring it may take up to ten to fifteen or more treatments to get good changes. Pigmentation problems also take a larger number of sessions similar to acne scarring. Very severe cases will continue to improve with more treatments. The maximum benefit is usually seen by the fifth day after treatment as the new skin layers establish themselves.

CARE AFTER TREATMENT

Usual **moisturisers** and **cosmetics** etc can be used immediately afterwards.

Sun block should be used to protect the skin as the more tough layers have been removed and the full skin depth decreased.

Glycolic, other AHA, and **Retin A** preparations should be **avoided** the **first night or two** after a treatment. But it will be noticed that such tropical preparations will be more effective with the removal of the older skin layers. At times a lower strength may be required in future.

LONG TERM TREATMENT

After the desired response is achieved, further sessions can be done as required. Changes such as makeup clumping again, the skin not appearing as smooth, youthful or clear are good indicators. A single maintenance treatment at a time is usually

sufficient. Something like every 4-6 weeks may be ideal for some people. Acne scarring problems usually do not require long term treatment.

WHAT ELSE CAN BE USED?

Deeper scar lines, folds and wrinkles that do not totally fade can be treated by dermal fillers eg Restylane. Dysport (like Botox) can be used to reduce lines caused by muscle tension.



MEDICAL MICROEPI- DERMABRASION

Skin Resurfacing

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